

IN THE CLAIMS:

Kindly amend claims 1, 6-11, 14, 18, 25, 26, cancel claims 19, 21-24, 27-29, and add claims 30-36, all as follows, without prejudice:

1. (Currently amended) A light emitting assembly comprising
  - a metal substrate providing an electrically insulating coating less than one thousand microns thickness;
  - a plurality of circuit traces on the electrically insulating coating providing terminals and conductive paths for placing light emitting elements in circuit, the terminals being of a ~~metal~~ composition compatible with metal droplet connections;
  - a plurality of light emitting elements having leads bonded to the terminals with metal droplets and providing a thermally conductive base having a flat section of predetermined area; and
  - ~~a metal coating on the substrate~~ thermal conductor, having therein a metal, fixed relative to the substrate, spaced from and electrically isolated from the circuit traces, the entire flat section of the base of at least some of the light emitting elements being in conductive heat transmitting relation with the thermal conductor ~~between at least some of the light emitting elements and the substrate transmitting heat from the light emitting elements to the metal substrate.~~

2. (Original) The light emitting assembly of claim 1 wherein the metal substrate is selected from the group consisting essentially of aluminum, aluminum alloys, magnesium, and magnesium alloys and the electrically insulating coating is an anodized layer.

3. (Original) The light emitting assembly of claim 1 wherein the electrically insulating coating is a cured thick film coating.

4. (Original) The light emitting assembly of claim 1 wherein the electrically insulating coating is a porcelain enamel.

5. (Original) The light emitting assembly of claim 1 wherein the electrically insulating coating is a plasma applied coating.

6. (Currently amended) The light emitting assembly of claim 1 wherein the ~~metal-coating~~ thermal conductor provides a shiny metal ~~patch~~ section reflecting light from the light emitting element away from the substrate thereby increasing the reflectivity of the assembly and increasing the amount of light emitting from the assembly.

7. (Currently amended) The light emitting assembly of claim 1 wherein the light emitting element includes a metallic lower

surface and the metallic lower surface abuts the ~~metal-coating~~  
thermal conductor.

8. (Currently amended) The light emitting assembly of claim 1 wherein the thermal conductor is a coating on the substrate and the circuit traces and the ~~metal-coating~~ thermal conductor are of the same material.

9. (Currently amended) The light emitting assembly of claim 8 wherein the circuit traces and the ~~metal-coating~~ thermal conductor comprise silver.

10. (Currently amended) The light emitting assembly of claim 9 further comprising a clear finish over the ~~metal-coating~~ thermal conductor thereby reducing tarnishing of the silver.

11. (Currently amended) The light emitting assembly of claim 9 wherein the circuit traces and the ~~metal-coating~~ thermal conductor are a mixture of silver and glass.

12. (Original) The light emitting assembly of claim 1 wherein the circuit traces are thin film traces.

13. (Original) The light emitting assembly of claim 1 wherein the circuit traces are thick film traces.

14. (Currently amended) The light emitting assembly of claim 1 wherein the substrate comprises an area ~~increasing~~ of undulating surface increasing the heat transmission capacity of the substrate.

15. (Original) The light emitting assembly of claim 1 wherein the metal droplet is a soldered connection.

16. (Original) The light emitting assembly of claim 1 wherein the metal droplet is a wire-bonded connection.

17. (Original) The light emitting assembly of claim 1 further comprising a resistor in thermal contact with the substrate in circuit with the light emitting element.

18. (Currently amended) A light emitting assembly comprising  
a metal substrate having a surface providing an electrically insulating coating less than one thousand microns thickness;  
a plurality of circuit traces on the electrically insulating coating providing terminals and conductive paths for placing light

emitting elements in circuit, the terminals being of a ~~metal~~  
composition compatible with metal droplet connections;

a plurality of light emitting elements having leads bonded to  
the terminals with metal droplets;

a shiny metal coating on the substrate, electrically isolated  
from the circuit traces, positioned to reflect light away from the  
metal substrate thereby increasing the reflectivity of the  
substrate and increasing the amount of light emitting from the  
assembly; and

a clear finish covering at least part of the metal coating and  
reducing tarnishing thereof.

19. (Cancelled)

20. (Original) The light emitting assembly of claim 18 wherein the  
metal coating and the circuit traces are of the same silver based  
material.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Currently amended) A light emitting assembly comprising

a metal substrate having a surface providing an electrically insulating coating less than one thousand microns thickness;

a plurality of circuit traces on the electrically insulating coating providing terminals and conductive paths between the terminals for placing light emitting elements in circuit, the circuit traces comprising a quantity of silver effective to make the paths conductive, to make the terminals compatible with ~~metal droplet~~ solder and wire-bonded connections and to reflect a significant amount of light away from the substrate; and

at least one light emitting element having leads bonded to the terminals with ~~metal droplets~~ solder or wire-bonded connections and having a flat thermally conductive base, electrically isolated from the circuit traces, juxtaposed to and entirely in conductive heat transmitting relation with the substrate.

26. (Currently amended) A light emitting assembly comprising

- a metal substrate having a surface providing an electrically insulating coating less than one thousand microns thickness;
- a plurality of circuit traces on the coating providing terminals and conductive paths between the terminals for placing light emitting elements in circuit;
- a plurality of light emitting elements having leads bonded to the terminals;
- a shiny metallic area comprising a silver rich coating on the substrate, electrically isolated from the circuit traces, for reflecting light from the light emitting elements away from the substrate thereby increasing useful light from the assembly and reducing energy absorption by the substrate; and
- a clear finish covering at least part of the shiny metallic area and reducing tarnishing thereof.

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (New) A light emitting assembly comprising

a metal substrate providing an electrically insulating coating less than one thousand microns thickness;

a plurality of circuit traces on the electrically insulating coating providing terminals and conductive paths for placing light emitting elements in circuit, the terminals being of a composition compatible with metal droplet connections; and

a plurality of light emitting elements having leads bonded to the terminals with metal droplets, the light emitting elements having a thermally conductive base, electrically isolated from the circuit traces, providing a flat section of predetermined area, the entire flat section being in conductive heat transmitting relation with the substrate.

31. (New) The light emitting assembly of claim 30 further comprising a thermal conductor fixed to the substrate, the entire flat section being in conductive heat transmitting relation with the thermal conductor, the thermal conductor being in conductive heat transmitting relation between the base of the light emitting element and the substrate.



32. (New) The light emitting assembly of claim 30 wherein the entire flat section of the light emitting element is in conductive heat transmitting relation with the electrically insulating coating.

33. (New) The light emitting assembly of claim 30 wherein the insulating coating has a hole immediately under the entire flat section of the light emitting element is in conductive heat transmitting relation to the substrate through the hole.

34. (New) The light emitting assembly of claim 30 wherein the circuit traces comprise silver and glass.

35. (New) The light emitting assembly of claim 32 wherein the metal droplet connection is solder.

36. (New) The light emitting assembly of claim 32 wherein the metal droplet connection is a wire-bonded connection.